

these control facilities, and useful information for their implementation (choice, cost, financing...) are made. *In case of failed assessment*: the person must be informed of his clinical case and his possible evolution, especially further improvement of driving abilities, and possibilities of cognitive rehabilitation would be considered. Without anosognosia, an on-road retraining of driving may be proposed, but the efficacy cannot be guaranteed. It should not exceed 10 hours, and should be stopped, after few sessions without progress. In case of permanent inability of driving recovery, the person, still supported by a trusted person if possible, should be informed of available driving alternatives, also of financial help mobilized in order to maintain the mobility and the social involvement.

**Discussion/conclusion** The person's place is central. The role of the information is essential with oral and writing modalities of transmission, with criteria of progressivity, considering experiences and feelings.

**Keywords** Automobile driving; Acquired brain damage; Rehabilitation

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#### CO49-005-e

### Evaluation of driving resumption after acquired brain damage: Garches's experiment

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**Objective** To describe the assessment of driving abilities practices after acquired brain damage, and the factors associated with driving resumption.

**Material and method** Fifty-six traumatic brain injury (TBI) and stroke participants assessed, between 2010 and 2013, from the multidisciplinary consultation of R.-Poincaré hospital (Garches), associating a medical evaluation, to eliminate possible contraindication of driving resumption and estimate the need of vehicle adaptation, a neuropsychologic assessment, and a road test. Study of personal (gender, age, level of studies, driving experience), medical (pathology, time since the accident, duration of coma or post-traumatic amnesia), functional (vehicle adaptation needed) and cognitive (results of neuropsychological tests) factors, being able to influence the ability of driving resumption.

**Results** Of the 56 patients, 34 (61%) were found suitable to resume driving, at the end of their evaluation. This study advances the impact of several factors on the capacities of driving resumption after acquired brain damage: time since the cerebral accident; severity of the TBI; functional sequelae requiring vehicle adaptations; cognitive disorders. The patients found suitable after the road test, obtained performances significantly better during the neuropsychologic assessment, unless no test, individually considered, allows predicting, in an infallible way, the final result. The measures of time answers in the neuropsychologic tests are the most sensitive.

**Conclusion** This study consolidates the importance of a global evaluation, associating a road test with the clinical, functional and cognitive evaluations, to appreciate the ability of driving resumption after acquired brain injury.

**Keywords** Automobile driving; Brain injury; Cognitive disorders

**Disclosure of interest** The authors have not supplied their declaration of conflict of interest.

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#### CO49-006-e

### Two-year assessment of the activity of an evaluation unit of fitness to drive



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**Aim** Driving is a complex and essential activity for patient autonomy. High Health Authority practice guidelines for the assessment of brain injury patient ability to drive are to be published in 2015 [1]. The main objective of this study is to analyze the activity of an evaluation unit of driving ability. The second one is to assess the compliance with clinical practice guidelines.

**Method** Retrospective study concerning the relevance and the systematic nature of a medical assessment protocol ability to drive made by a PMR ward in tertiary university Hospital over a two year period. The protocol includes medical and ophthalmological evaluations, occupational therapy (OT) and neuropsychological assessment. Finally an on-road test with a suitable vehicle in the presence of a driving school instructor and an occupational therapist is made.

**Results** A total of 77 patients were evaluated in our unit. We considered after evaluation that about half (23/52) of brain-damaged patients assessed in our unit were able to drive. Forty-two ophthalmologic assessments, 31 neuropsychological assessments and 25 reviews with OT coupled to a road test were performed. Practical analysis confirmed that the multidisciplinary assessment of visual, sensorimotor, cognitive and road test are consistent with the guidelines. However, the highlight of a neglect syndrome had not systematically dissuaded the driving capacity, that is not in line with the HAS guidelines.

**Discussion** The assessment of ability to drive must be standardized, particularly concerning on-road test. Patient and family's information on the need to make such an assessment must be systematized and made as early as possible. It seems necessary to better estimate driving habits after evaluation of patient, whatever they were validated or not. It is also necessary to analyze post validation risk for accident [2]. Finally, these guidelines should be disseminated and shared by all stakeholders (evaluation unit, licensed physician, Committee on driving license).

**Keywords** Fitness to drive; Brain injury; Assessment

**Disclosure of interest** The authors have not supplied their declaration of conflict of interest.

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#### CO49-007-e

### Simulator-based driving assessment after stroke: Interest as a complement to cognitive evaluation



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**Introduction** Driving is a complex activity that requires motor, visuo-perceptual, behavioral and cognitive abilities, which all